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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/769,496	01/30/2004	Ahmad A. J. Ali	016295.1522	8751
23640	7590	09/21/2007		
BAKER BOTTS, LLP 910 LOUISIANA HOUSTON, TX 77002-4995			EXAMINER CONTINO, PAUL F	
			ART UNIT 2114	PAPER NUMBER
			NOTIFICATION DATE 09/21/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

debbie.allen@bakerbotts.com

Office Action Summary

Application No.

10/769,496

Applicant(s)

ALI, AHMAD A. J.

Examiner

Paul Contino

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-9 and 19-36 is/are allowed.
- 6) ☒ Claim(s) 10-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 10-18 have been considered but are moot in view of the new grounds of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 10 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haines et al. (U.S. Patent 6,496,313) in view of Lenny et al. (U.S. Patent 6,650,492), further in view of Ryan (U.S. Patent 4,479,214).

As in claim 10, Haines et al. teaches a method for media repair of a storage device, comprising:

performing a read operation on the storage device (*column 3 line 65*);

detecting a signature if the read operation does not return an error (*column 3 line 56 through column 4 line 1, where the ECC field is a signature detected if the read does not return an error; column 7 lines 6-19*); and

performing a write operation the storage device (*column 4 lines 60-62*).

However, Haines et al. fails to teach of counter and data information or incrementing of a counter. Lenny et al. teaches of a write operation performed with counter and date information (*column 5 lines 25-30 and 59-65, and column 6 lines 12-15*). Ryan teaches of incrementing the counter information if the signature is detected (*column 2 lines 44-47 and 55-57, and column 4 lines 36-41, where if a read occurs then the access counter is incremented*).

It would have been obvious to a person skilled in the art at the time the invention was made to have included the counter and date information as taught by Lenny et al. in the invention of Haines et al. This would have been obvious because inclusion of counter and data information as taught by Lenny et al. allows for effective diagnostics of a failing storage system (*column 6 lines 15-18*).

It would have been obvious to a person skilled in the art at the time the invention was made to have included the counter incrementing as taught by Ryan in the combined invention of Haines et al. and Lenny et al. This would have been obvious because incrementing of a counter as taught by Ryan enhances the ability to determine if a memory contains faults by counting multiple reads on a memory and evaluating the ratio of errors-to-reads to verify correct operation of a memory.

As in claim 18, Haines et al., Lenny et al., and Ryan teach the storage device is a non-RAID device (*entirety of Specifications*).

* * *

3. Claims 11, 13, 14, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haines et al. in view of Lenny et al., further in view of Ryan, further in view of Humlicek et al. (U.S. Patent 6,944,791).

As in claim 11, the combined invention of Haines et al., Lenny et al., and Ryan teaches the limitations of claim 10. However, the combined invention of Haines et al., Lenny et al., and Ryan fails to teach of a non-redundant RAID. Humlicek et al. teaches the storage device is a non-redundant RAID configuration (*entirety of Specification*).

It would have been obvious to a person skilled in the art at the time the invention was made to have included the RAID as taught by Humlicek et al. in the combined invention of Haines et al., Lenny et al., and Ryan. This would have been obvious because the invention of Humlicek et al. allow for the continuation of normal processing during a fault in order to reduce system downtime (*column 1*).

As in claim 13, the combined invention of Haines et al., Lenny et al., and Ryan teaches the limitations of claim 10. However, the combined invention of Haines et al., Lenny et al., and Ryan fails to teach of a WRITE LONG operation. Humlicek et al. teaches the write operation is a WRITE LONG operation (*column 5 line 40 through column 6 line 11*).

It would have been obvious to a person skilled in the art at the time the invention was made to have included the WRITE LONG as taught by Humlicek et al. in the combined invention of Haines et al., Lenny et al., and Ryan. This would have been obvious because the invention of Humlicek et al. allow for the continuation of normal processing during a fault in order to reduce system downtime (*column 1*).

As in claim 14, Humlicek et al. teaches the WRITE LONG operation produces invalid ECC data (*column 5 line 40 through column 6 line 11*).

It would have been obvious to a person skilled in the art at the time the invention was made to have included the WRITE LONG as taught by Humlicek et al. in the combined invention of Haines et al., Lenny et al., and Ryan. This would have been obvious because the invention of Humlicek et al. allow for the continuation of normal processing during a fault in order to reduce system downtime (*column 1*).

As in claim 15, the combined invention of Haines et al., Lenny et al., and Ryan teaches the limitations of claim 10. However, the combined invention of Haines et al., Lenny et al., and Ryan fails to teach of a SCSI device. As in claim 15, Humlicek et al. teaches the storage device is a SCSI device (*column 6 lines 9-11*).

It would have been obvious to a person skilled in the art at the time the invention was made to have included the SCSI as taught by Humlicek et al. in the combined invention of Haines et al., Lenny et al., and Ryan. This would have been obvious because the invention of

Humlicek et al. allow for the continuation of normal processing during a fault in order to reduce system downtime (*column 1*).

* * *

4. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Haines et al. in view of Lenny et al., further in view of Ryan, further in view of Williams et al. (U.S. PGPub 2001/0042230).

As in claim 12, the combined invention of Haines et al., Lenny et al., and Ryan teaches the limitations of claim 10. However, the combined invention of Haines et al., Lenny et al., and Ryan fails to teach of a READ LONG. Williams et al. teaches of a READ LONG (*paragraphs [0013], [0014], and [0056]*).

It would have been obvious to a person skilled in the art at the time the invention was made to have included the READ LONG as taught by Williams et al. in the combined invention of Haines et al., Lenny et al., and Ryan. This would have been obvious because it is well-known in the art to use read/write long operations and corrupt ECC data in order to validate a storage device (*Williams et al.: paragraphs [0008] and [0009]*).

* * *

5. Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haines et al. in view of Lenny et al., further in view of Ryan, further in view of George (U.S. Patent 6,993,679).

As in claims 16 and 17, the combined invention of Haines et al., Lenny et al., and Ryan teaches of a storage device. However, the combined invention of Haines et al., Lenny et al., and Ryan fails to teach of an ATA or IDE storage device. George teaches of an ATA and IDE storage device (*column 6 lines 3-5*).

It would have been obvious to a person skilled in the art at the time the invention was made to have included the storage device types as taught by George in the combined invention of Haines et al., Lenny et al., and Ryan. This would have been obvious because the invention of George teaches of determining an error in a storage device while reassigning and mapping defective disk areas in order to increase the integrity of stored data (*column 2 lines 1-23*).

Allowable Subject Matter

6. Claims 1-9 and 19-36 are allowed.

7. The following is a statement of reasons for the indication of allowable subject matter:

8. As in claim 1, the limitations involving the sequencing of the limitations with respect to locking/unlocking of logical block addresses in response to a read error, when read within the

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remainder of the limitations of the claim, make claim 1 allowable over the prior art. Claims 2-9 are allowable based upon their dependence to claim 1.

9. As in claim 19, the limitations involving the sequencing of the limitations with respect to locking/unlocking of logical block addresses in response to a read error, when read within the remainder of the limitations of the claim, make claim 19 allowable over the prior art. Claims 20-27 are allowable based upon their dependence to claim 19.

10. As in claim 28, the limitations involving the sequencing of the limitations with respect to locking/unlocking of logical block addresses in response to a read error, when read within the remainder of the limitations of the claim, make claim 28 allowable over the prior art. Claims 29-36 are allowable based upon their dependence to claim 28.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Contino whose telephone number is (571) 272-3657. The examiner can normally be reached on Monday-Friday 9:00 am - 6:00 pm.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Scott Baderman can be reached on (571) 272-3644. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

9/6/2007

PFC


SCOTT BADERMAN
SUPERVISORY PATENT EXAMINER